AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method for compensating for variations in modeled parameters of a plurality of machines having similar characteristics and performing similar operations, including the steps of:

establishing a model development machine having a first at least one model to predict a machine parameter;

establishing at least one test machine having a second at least one model to predict the machine parameter, the test machine being different from the model development machine;

obtaining data relevant to predicting the machine parameter on the at least one test machine and relevant to the characteristics and operations of the at least one test machine;

comparing the data from the at least one test machine to corresponding data of the model development machine; and

updating at least one of an estimator and a model of each at least one test machine in response to variations in the compared data.

2. (Original) A method, as set forth in claim 1, wherein each of the model development machine and the at least one test machine includes a neural network for modeling a parameter of each respective machine, and wherein updating at

least one of an estimator and a model includes the step of updating an estimator for each neural network in response to variations in the compared data.

3. (Original) A method, as set forth in claim 1, wherein each of the model development machine and the at least one test machine includes a neural network for modeling a parameter of each respective machine, and wherein updating at least one of an estimator and a model includes the step of updating each neural network in response to variations in the compared data.

4. (Original) A method, as set forth in claim 1, wherein obtaining data includes the step of obtaining data from each test machine relevant to operating characteristics of each respective test machine.

5. (Original) A method, as set forth in claim 1, wherein obtaining data includes the step of obtaining data from a work site in which a respective test machine is located, the data including data relevant to characteristics of the work site and operations of the test machine at the work site.

6. (Original) A method, as set forth in claim 1, wherein obtaining data includes the step of obtaining data relevant to aging of each test machine.

7. (Currently Amended) A method for compensating for variations in modeled parameters of a test machine compared to a model development machine, the

test machine being different from the model development machine, including the steps of:

delivering a neural network model from the model development machine to the test machine, the test machine having a separate neural network model;

determining a computed parameter on the test machine;

estimating the parameter on the test machine with the delivered neural network;

comparing the computed parameter with the estimated parameter; and

updating at least one of an estimator and the neural network model on the test machine in response to variations in the computed parameter and the estimated parameter.

8. (Original) A method, as set forth in claim 7, wherein determining a parameter includes the step of calculating the parameter.

9. (Original) A method, as set forth in claim 7, wherein updating a neural network model includes the step of tuning at least one weight in the neural network model.

10. (Currently Amended) A method for compensating for variations in modeled parameters of a plurality of machines having similar characteristics and performing similar operations with the use of a computer having a processor, the

plurality of machines including at least one model development machine and one test machine, including the steps of:

sensing data from each of the plurality of machines relevant to the modeled parameters, characteristics, and operations of each respective machine, the modeled parameters derived from a model developmental machine being different for each respective machine;

transmitting the data to the processor;

determining a level of variability of the characteristics of each machine as a function of the data;

determining a level of variability of the operations of each machine relevant to a respective work site as a function of the data;

determining an aging factor of each machine as a function of the data; and

updating at least one of an estimator and a model of each machine encoded in the computer in response to the level of variability of the characteristics of each machine, the level of variability of the operations of each machine relevant to each work site, and the aging factor.

11. (Original) A method, as set forth in claim 10, wherein determining a level of variability of the operations of each machine relevant to a respective work site includes the step of determining a level of variability as a function of differences in characteristics between each work site.

12. (Original) A method, as set forth in claim 10, wherein determining an aging factor of each machine includes the step of determining a level of variability of operations of each machine as a function of aging of each respective machine.